IN THE SPECIFICATION

Immediately following the title, please insert the following paragraph:

CROSS REFERENCE TO RELATED APPLICATIONS

This is the U.S. National Phase of PCT/NL2004/000900, filed December 22, 2004, which in turn claims priority to U.S. Patent Application No. 10/740,824, filed December 22, 2003, both of which are incorporated herein in their entirety by reference.

Please replace paragraph [00023] on page 9, with the following amended paragraph:

[00023] Figures 3a and 3b depict graphs from which process dependent errors can be deduced in a method according to an embodiment of the invention;

Please replace paragraph [00067] on page 24, with the following amended paragraph:

[00067] Prior to exposure of the substrate W, a height map of the substrate W may be determined using a level sensor that is subject to the same PDOE as the second sensor 11 used to determine the PDOE map. ~~Of course, the~~ The second sensor 11 and the level sensor can also be one and the same sensor. The measurements of the level sensor can now be corrected with the use of the PDOE map e.g. by simply adding the content of the PDOE map for that corresponding position on the target portion C to the measurement of the level sensor. For instance, this calculation may be done by processor 12, using data previously stored in memory unit 13. Such a method may make it possible to process substrates W with a relatively high processing rate, since the height map is obtained with a relatively fast level sensor, while process dependent errors are compensated.

Please replace paragraph [00072] on page 25, with the following amended paragraph:

[00072] In such a machine, the measurements of the level sensor at the measurement position may be corrected for the process dependent offset error using the PDOE map.

However, it is also possible to instead apply the correction during exposure. ~~Of course, a~~ A same method could be used for a single stage machine, where e.g. the measurement and exposure position are the same position, and the height map is constructed before exposure.

Please replace paragraph [00091] on page 32, with the following amended paragraph:

[00091] In a method according to a further embodiment, each combination of a measurement value of, e.g. sensor 10 and a difference Δ with the measurement value of sensor 11 has a unique relation with one real height. Per combination of measurement value of sensor 10 and difference Δ, a value of PDOE can therefore be derived. Based on the graph of Fig. 3a, the graph depicted in Fig. 3b can be obtained, showing the PDOE of the first sensor 10 as a function of the difference Δ between the first and second sensors 10, 11. The PDOE of the first sensor 10 can simply be obtained by e.g. computing the difference between the reading of the first sensor 10 with the real height. It may be desirable or important for the graph of PDOE as a function of Δ to be a ~~monotone~~ monotonic function (that may either be increasing or decreasing), e.g. for reasons that will be explained below. Of course, a corresponding graph can also be obtained for the second sensor 11.

Please replace paragraph [00094] on page 33, with the following amended paragraph:

[00094] In a method according to a further embodiment of the invention, a difference between the readings of the first sensor 10 and the second sensor 11 as a function of the process dependent parameter is a ~~monotone~~ monotonic upward or downward function. In a method according to another embodiment this is not the case, and it may be difficult or impossible to determine the PDOE unambiguously, unless more knowledge of the process dependent parameter (e.g. resist and oxide thickness ranges, layout, materials used) is known.

Please replace paragraph [00095] on page 33, with the following amended paragraph:

[00095] The possible values for the difference can be limited to get a ~~monotonous~~ monotonic function, or the difference function may be split up in several ~~monotonous~~

montonic parts. For instance, if the graph of Fig. 3b is an oscillating function, a method as described in this embodiment may still be used if additional information is known (for instance, if the height to be determined is known with in a certain range, and the graph is monotonous in that range). This problem can also be reduced by using more than two sensors, as will be discussed below.

Please replace paragraph [000102] beginning on page 35, with the following amended paragraph:

[000102] Furthermore, it will be understood by a person skilled in the art, that a similar method may be applied using more than two sensors. For example, it may be possible to determine the PDOE based on differences between measurements done by a number of process dependent sensors having different process dependencies. Also, in a case where the difference between the graphs in Fig. 3a is only a ~~monotonous~~ monotonic function of the process dependent parameter over a certain range, more sensors may be used.